

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of the claims:

1. (currently amended) A radio module for an electrical device, comprising:
a radio transceiver;
an antenna electrically coupled to the radio transceiver; and
an electromagnetic shield disposed around the antenna to isolate the antenna from loading effects of components of the electrical device that are external to the radio module, wherein the radio transceiver operates as an electromagnetic shield for one side of the antenna and is externally located outside the electromagnetic shield that is disposed around the antenna.

2. (canceled)

3. (original) The radio module, as set forth in claim 1, comprising a printed circuit board, wherein the antenna is disposed on the printed circuit board.

4. (original) The radio module, as set forth in claim 3, wherein the shield comprises a metal plate coupled to the printed circuit board.

5. (original) The radio module, as set forth in claim 4, wherein the shield is disposed relative to the transceiver to isolate the transceiver from electromagnetic interference from electrical components within the electrical device.

6. (original) The radio module, as set forth in claim 4, wherein the radio module further comprises a cover disposed over the antenna and adapted to extend through an opening in the side of the electrical device, the cover comprising a material that is generally transparent to radio signals.

7. (original) The radio module, as set forth in claim 1, wherein the shield comprises a housing disposed around the antenna, the housing having a portion generally transparent to radio signals from the antenna.

8. (original) The radio module, as set forth in claim 7, wherein the housing is disposed around the transceiver.

9. (original) The radio module, as set forth in claim 7, wherein the housing comprises a conductive metal.

10. (original) The radio module, as set forth in claim 7, wherein the housing comprises a polymeric material having a conductive coating.

11. (original) The radio module, as set forth in claim 7, wherein the housing comprises a periodic band-gap material.

12. (previously presented) A radio module in an electronic device, comprising:
a printed circuit board;
an antenna disposed on the printed circuit board;
an electromagnetic shield extending from the printed circuit board around the antenna to isolate the antenna from loading effects of components of the electronic device that are external to the radio module, wherein the radio module is coupled to an enclosure and the electromagnetic shield extends from the printed circuit board to the enclosure;
and

a radio transceiver located outside the electromagnetic shield and adjacent to the antenna and providing an electromagnetic shield for the antenna.

13. – 14. (canceled)

15. (previously presented) The radio module, as set forth in claim 12, wherein the shield comprises a portion generally transparent to radio signals produced by the radio module, the portion being disposed in facing relationship with the antenna.

16. (previously presented) The radio module, as set forth in claim 12, wherein the antenna is disposed within the enclosure.

17. (original) The radio module, as set forth in claim 16, wherein the radio module further comprises a cover disposed over the antenna, the cover being generally transparent to radio signals at the operating frequency of the radio module.

18. (original) The radio module, as set forth in claim 12, wherein the shield comprises a metal plate disposed on the printed circuit board.

19. (original) The radio module, as set forth in claim 18, wherein the metal plate is disposed on the side of the printed circuit board opposite the antenna.

20. – 26. (canceled)

27. (previously presented) A method of manufacturing a radio module for use within an electrical device, comprising:

tuning an antenna to produce a maximum output at a defined load;

disposing a shield around the antenna to establish the defined load on the antenna and to isolate the antenna from electrical noise generated by electrical components within the electrical device but external to the radio module; and

disposing a radio transceiver outside of the shield and adjacent to the antenna so the radio transceiver operates as an electromagnetic shield for the antenna.

28. (previously presented) The method, as set forth in claim 27, wherein disposing the shield comprises disposing an antenna housing around a perimeter of the antenna.

29. (previously presented) The method, as set forth in claim 27, wherein disposing the shield comprises disposing the antenna on a printed circuit board and disposing a conductive plate on the printed circuit board opposite the antenna.

30. (canceled)

31. (previously presented) The method, as set forth in claim 27, further comprising: fabricating the shield with a conductively-coated plastic foam.

32. (previously presented) The method, as set forth in claim 27, further comprising: fabricating the shield with an open side to enable radio signals to be transmitted to and received by the antenna.